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(54) MANUFACTURE OF ANISOTROPIC OXIDE MAGNETIC POWDER AN OF PLASTIC MAGNET

(57)Abstract:
PURPOSE: To improve magnetic characteristics by blending Fe2O3 and Fe3O4 such that the molar ratio thereof is (1-1.05):8, and adding Zn such that it is 1.0-10mol% of Fe2+, and calcining them under specific conditions.
CONSTITUTION: For manufacturing anisotropic oxide magnetic powder having a hexagonal structure, Fe2O3 and Fe3O4 are blended as iron oxides such that the mole ratio of Fe2+ and Fe3+ is (1-1.05):8. Additionally, zinc oxide and/or a compound that changes to zinc oxide by heating is added such that Zn is 1.0-10mol% of Fe2+, and is calcined at temperature 1150-1250°C and at oxygen partial pressure 1×10-4 to 1×10-3atm. The calcined powder is ground and rendered to a heat-treatment for uniformization. Hereby, a W type hexagoal system ferrite magnetic powder can be manufactured with simplified control and hence magnetic properties of a plastic magnet can be improved using magnetic powder.

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